Appl. No.: 10/606,128
Amdt. Dated: 08/06/2004
Off. Act. Dated: 05/06/2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended): In a hybrid electric vehicle having an internal combustion engine, an electric motor, and a battery system and controller for powering the electric motor, the improvement comprising:

providing a transmission between said electric motor and a set of wheels in said vehicle; and

controlling ~~the~~ interaction between the internal combustion engine, ~~and~~ the electric motor and the transmission ~~by taking~~ to regenerate energy into the battery system only if ~~it is more fuel efficient than throttling the engine and operating the engine at a lower efficiency~~ engine fuel efficiency during regeneration and during subsequent power production from the electric motor is greater than engine fuel efficiency resulting from throttling the engine to reduce engine/motor power.

2. (canceled)

3. (currently amended): A method for controlling the ~~interaction between~~ power output of an internal combustion engine and electric motor operated by a battery system and controller in a hybrid electric vehicle, comprising:

providing a transmission between said electric motor and a set of wheels in said vehicle; and

~~taking~~ controlling interaction between the internal combustion engine, the electric motor and the transmission to regenerate energy into the battery system only if ~~it is more fuel efficient than throttling the engine and operating the engine at a lower~~

~~efficiency~~ engine fuel efficiency during regeneration and during subsequent power production from the electric motor is greater than engine fuel efficiency resulting from throttling the engine to reduce engine/motor power.

4. (canceled)

5. (currently amended): An apparatus for controlling the ~~interaction between~~ power output of an internal combustion engine and electric motor operated by a battery system and controller in a hybrid electric vehicle, comprising:

a computer; and

programming associated with said computer for ~~taking~~ controlling interaction between the internal combustion engine, the electric motor and a transmission between the electric motor and a set of wheels in the vehicle to regenerate energy into the battery system only if ~~it is more fuel efficient than throttling the engine and operating the engine at a lower efficiency~~ engine fuel efficiency during regeneration and during subsequent power production from the electric motor is greater than engine fuel efficiency resulting from throttling the engine to reduce engine/motor power.

Claims 6-24 (canceled)

25. (new): An improvement as recited in claim 1, wherein said transmission comprises a multispeed transmission.

26. (new): An improvement as recited in claim 1, wherein said transmission comprises a continuously variable transmission.

27. (new): A method as recited in claim 3, wherein said transmission comprises a multispeed transmission.

28. (new): A method as recited in claim 3, wherein said transmission comprises a continuously variable transmission.

29. (new): An apparatus as recited in claim 5, wherein said transmission comprises a multispeed transmission.

30. (new): An apparatus as recited in claim 5, wherein said transmission comprises a continuously variable transmission.